

EXPRESS MAIL
CERTIFICATE OF MAILING



Patent Application for:

Applicants: Federico Capasso
Alfred Yi Cho
Raffaele Colombelli
Claire F. Gmachl

Atty. No: 65-104-1-19-28-7-34-13

Albert Lee Hutchinson
Arthur Mike Sargent
Deborah Lee Sivco
Alessandro Tredicucci

Title: Technique for Measuring Intersubband
Electroluminescence in a Quantum Cascade
Laser

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Washington, D.C. 20231

On 4/4/01

EXPRESS MAIL TRACKING NO. EF172632415 US

Type or Print name of person signing this certificate: Wendy W. Koba, Esq.

Signature: Wendy W. Koba

IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE

PATENT APPLICATION

CASE Capasso 65-104-1-19-28-7-34-13

TITLE Technique for Measuring Intersubband
Electroluminescence in a Quantum Cascade Laser

THE COMMISSIONER OF PATENTS AND TRADEMARKS
WASHINGTON, D.C. 20231

SIR

Enclosed are the following papers related to the above-name application for patent:

Specification
5 Informal sheet (s) of drawings
1 Assignment-To be recorded
Declaration and Power of Attorney
Associate Power of Attorney
Recordation Form Cover Sheet (2 copies)

CLAIMS AS FILED				
	No. Filed	No. Extra	Rate	Calculations
Total Claims	11	-20=	○	x \$18 ○
Independent Claims	2	-3=	○	x \$80 ○
Multiple Dependent, if applicable				x \$270
BASIC FEE				\$710.00
				TOTAL FEES 710.00

Please file the application and charge Lucent Technologies, Inc. Deposit Account No. 12-2325 the amount of \$ 710.00 to cover the filing fee for this application. In the event of any non-payment or improper payment of a required fee, the Commissioner is authorized to charge or credit Deposit Account No. 12-2325 as required to correct the error.

Please address all correspondence to Wendy W. Koba, P.O. Box 556, Springtown, PA 18081-0556. Telephone calls should be directed to Wendy W. Koba at 610-346-7112.

Respectfully,

Wendy W. Koba
Wendy W. Koba
Reg. No. 30509
Attorney for Applicant(s)
610-346-7112

Date: 4/4/01

J1057
10/40/04
U.S. PATENT AND TRADEMARK OFFICE

04-05-01

PTO/SB/05 (11-00)

Approved for use through 10/31/2002. OMB 0651-0032

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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UTILITY
PATENT APPLICATION
TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. Fee Transmittal Form (e.g., PTO/SB/17)
(Submit an original and a duplicate for fee processing)

2. Applicant claims small entity status.
See 37 CFR 1.27.

3. Specification [Total Pages **11**]
(preferred arrangement set forth below)

- Descriptive title of the invention
- Cross Reference to Related Applications
- Statement Regarding Fed sponsored R & D
- Reference to sequence listing, a table, or a computer program listing appendix
- Background of the Invention
- Brief Summary of the Invention
- Brief Description of the Drawings *(if filed)*
- Detailed Description
- Claim(s)
- Abstract of the Disclosure

4. Drawing(s) (35 U.S.C. 113) [Total Sheets **5**]

5. Oath or Declaration [Total Pages **11**]

- a. Newly executed (original or copy)
- b. Copy from a prior application (37 CFR 1.63 (d))
(for continuation/divisional with Box 18 completed)
 - i. **DELETION OF INVENTOR(S)**
Signed statement attached deleting inventor(s) named in the prior application. see 37 CFR 1.63(d)(2) and 1.33(b).

6. Application Data Sheet. See 37 CFR 1.76

Attorney Docket No. **65-104-1-19-28-7-34-13**First Inventor **Capasso**Title **Technique for Measuring Intersubband Electroluminescence in a Quantum Cascade Laser**Express Mail Label No. **EF172632415 US**ADDRESS TO: Assistant Commissioner for Patents
Box Patent Application
Washington, DC 20231

7. CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)

8. Nucleotide and/or Amino Acid Sequence Submission
(if applicable, all necessary)

- a. Computer Readable Form (CRF)
- b. Specification Sequence Listing on:
 - i. CD-ROM or CD-R (2 copies); or
 - ii. paper
- c. Statements verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

9. Assignment Papers (cover sheet & document(s))

10. 37 CFR 3.73(b) Statement Power of Attorney
(when there is an assignee)

11. English Translation Document *(if applicable)*

12. Information Disclosure Statement (IDS)/PTO-1449 Copies of IDS Citations

13. Preliminary Amendment

14. Return Receipt Postcard (MPEP 503)
(Should be specifically itemized)

15. Certified Copy of Priority Document(s)
(if foreign priority is claimed)

16. Request and Certification under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.

17. Other:

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

 Continuation Divisional Continuation-in-part (CIP) of prior application No.

Prior application information: Examiner _____

Group Art Unit: _____

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

19. CORRESPONDENCE ADDRESS

<input type="checkbox"/> Customer Number or Bar Code Label	(Insert Customer No. or Attach bar code label here)			or <input type="checkbox"/> Correspondence address below
------------------------------------------------------------	-----------------------------------------------------	--	--	----------------------------------------------------------

Name	Wendy W. Koba, Esq.		
Address	PO Box 556		
City	Springtown	State	PA
Country	United States of America	Telephone	610-346-7112
		Zip Code	18081
		Fax	610-346-8189

Name (Print/Type)	Wendy W. Koba, Esq.	Registration No. (Attorney/Agent)	30509
Signature	Wendy W. Koba	Date	4/4/01

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FEE TRANSMITTAL for FY 2001

Patent fees are subject to annual revision.

TOTAL AMOUNT OF PAYMENT

(\$ 750.00)

Complete if Known

Application Number	
Filing Date	
First Named Inventor	Capasso
Examiner Name	
Group Art Unit	
Attorney Docket No.	65-104-1-19-28-7-34-13

METHOD OF PAYMENT				FEE CALCULATION (continued)																																																																																																																																																														
<p>1. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to:</p> <p>Deposit Account Number Lucent Technologies, Inc.</p> <p>Deposit Account Name 12-2325</p> <p><input type="checkbox"/> Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17</p> <p><input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27</p>				<p>3. ADDITIONAL FEES</p> <table border="1"> <thead> <tr> <th>Fee Code</th> <th>Large Entity Fee (\$)</th> <th>Small Entity Fee (\$)</th> <th>Fee Description</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr><td>105</td><td>130</td><td>205</td><td>65 Surcharge - late filing fee or oath</td><td></td></tr> <tr><td>127</td><td>50</td><td>227</td><td>25 Surcharge - late provisional filing fee or cover sheet</td><td></td></tr> <tr><td>139</td><td>130</td><td>139</td><td>130 Non-English specification</td><td></td></tr> <tr><td>147</td><td>2,520</td><td>147</td><td>2,520 For filing a request for ex parte reexamination</td><td></td></tr> <tr><td>112</td><td>920*</td><td>112</td><td>920* Requesting publication of SIR prior to Examiner action</td><td></td></tr> <tr><td>113</td><td>1,840*</td><td>113</td><td>1,840* Requesting publication of SIR after Examiner action</td><td></td></tr> <tr><td>115</td><td>110</td><td>215</td><td>55 Extension for reply within first month</td><td></td></tr> <tr><td>116</td><td>390</td><td>216</td><td>195 Extension for reply within second month</td><td></td></tr> <tr><td>117</td><td>890</td><td>217</td><td>445 Extension for reply within third month</td><td></td></tr> <tr><td>118</td><td>1,390</td><td>218</td><td>695 Extension for reply within fourth month</td><td></td></tr> <tr><td>128</td><td>1,890</td><td>228</td><td>945 Extension for reply within fifth month</td><td></td></tr> <tr><td>119</td><td>310</td><td>219</td><td>155 Notice of Appeal</td><td></td></tr> <tr><td>120</td><td>310</td><td>220</td><td>155 Filing a brief in support of an appeal</td><td></td></tr> <tr><td>121</td><td>270</td><td>221</td><td>135 Request for oral hearing</td><td></td></tr> <tr><td>138</td><td>1,510</td><td>138</td><td>1,510 Petition to institute a public use proceeding</td><td></td></tr> <tr><td>140</td><td>110</td><td>240</td><td>55 Petition to revive - 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*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$ **40.00**)

SUBMITTED BY		Complete if applicable		
Name (Print/Type)	Wendy W. Koba, Esq.	Registration No. (Attorney/Agent)	30509	Telephone 610-346-7112
Signature	Wendy W. Koba			Date 4/4/01

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